
ENVIRONMENTAL MANAGEMENT PLAN
EXPLORATION ACTIVITIES FOR BASE AND RARE METALS IN KUNENE REGION

APP NO: 2353

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ABBREVIATIONS

BID	Background Information Document
CC	Close Corporation
DEA	Directorate of Environmental Affairs
EA	Environmental Assessment
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
EMA	Environmental Management Act No.7 Of 2007
EMP	Environmental Management Plan
EPL	Exclusive Prospecting Licence
ESAR	Environmental Scoping Assessment Report
IAPs	Interested and Affected Parties
MC	Mining Claim
MEFT	Ministry Of Environment, Forestry and Tourism
MME	Ministry of Mines and Energy
NSA	Namibia Statistics Agency
PPP	Public Participatory Process
ToR	Terms of Reference

GLOSSARY

Definitions given below are for descriptive purposes only.

Activity	The physical work that a Proponent intends to construct, operate, change, decommission, or an activity that a Proponent proposes to carry out.
Alternative	A choice limited to one of two or more possibilities, as of things, proposals, or courses of action, the selection of which precludes any other possibility.
Assessment	The process of identifying, predicting, and evaluating the significant effects of activities on the environment; and the risks and consequences of activities and their alternatives and options for mitigation with a view to minimise the effects/impacts of activities on the environment.
Competent Authority	A body or person authorized under the local authorities act or Environmental Management Act to enforce the rule of law.
Contaminated Water	Water polluted by the Contractor's activities, e.g. concrete water, and runoff from plant/personnel wash areas.
Cumulative Impacts	In relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts from similar or diverse activities or undertakings in the area.
Environment	As defined in the Environmental Assessment Policy and Environmental Management Act - refers to "land, water and air; all organic and inorganic matter and living organisms as well as biological diversity; the interacting natural systems that include components referred to in sub-paragraphs, the human environment insofar as it represents archaeological, aesthetic, cultural, historic, economic, paleontological or social values".
Environmental Impact Assessment (EIA)	The process of examining the environmental effects of a development as prescribed by the Environmental Impact Assessment Regulations (2012) for activities listed as List of Activities which may not be undertaken without an Environmental Clearance Certificate from the Environmental Commissioner.
Environmental Management Plan (EMP)	A working document on environmental and socio-economic mitigation measures, which must be implemented by several responsible parties during all the phases of the proposed project.
Independent Environmental	A qualified professional independent from the Proponent and Contractor who oversees the construction phase and ensure that all environmental specifications and EMP

Control Officer	requirements are met during the phase. Will also be responsible for the monitoring, revising, and verifying of compliance with the EMP by the Contractor.
Interested & Affected Parties (IAP)	Any person, group of persons or organisation interested in, or affected by an activity; and any organ of state that may have influence over any aspect of the activity.
Listed Activity	An activity listed in terms of the Environmental Management Act (No. 7 of 2007) and its EIA Regulations (2012) and the List of Activities which may not be carried out without an Environmental Clearance Certificate from the Environmental Commissioner.
Mitigate	Measures to reduce adverse impacts.
Proponent	Defined in the Environmental Management Act (No.7 of 2007), as a person who proposes to undertake a listed activity.
Significant Impact	An impact by its magnitude, duration, intensity or probability of occurrence that may have a prominent effect on one or more
Solar Energy	Radiant light and heat from the sun that is harnessed using a range of technologies such as solar power to generate electricity, solar thermal energy (including solar water heating) and solar architecture.
Solar Panel	An assembly of photovoltaic solar cells mounted in a (usually) rectangular frame.

1. INTRODUCTION

1.1 Project Location and Description

The mining claim was applied for by Jaruvita Tjakorua as shown below and an Environmental Clearance Certificate has to be acquired in order for the proposed exploration activities to commence. Mining claim 74468 is located near sesfontein area in Kunene region. GPS coordinates Latitude: -19.2926°S and longitude: 14.2864° E. The anticipated exploration activities is for base and rare metals.

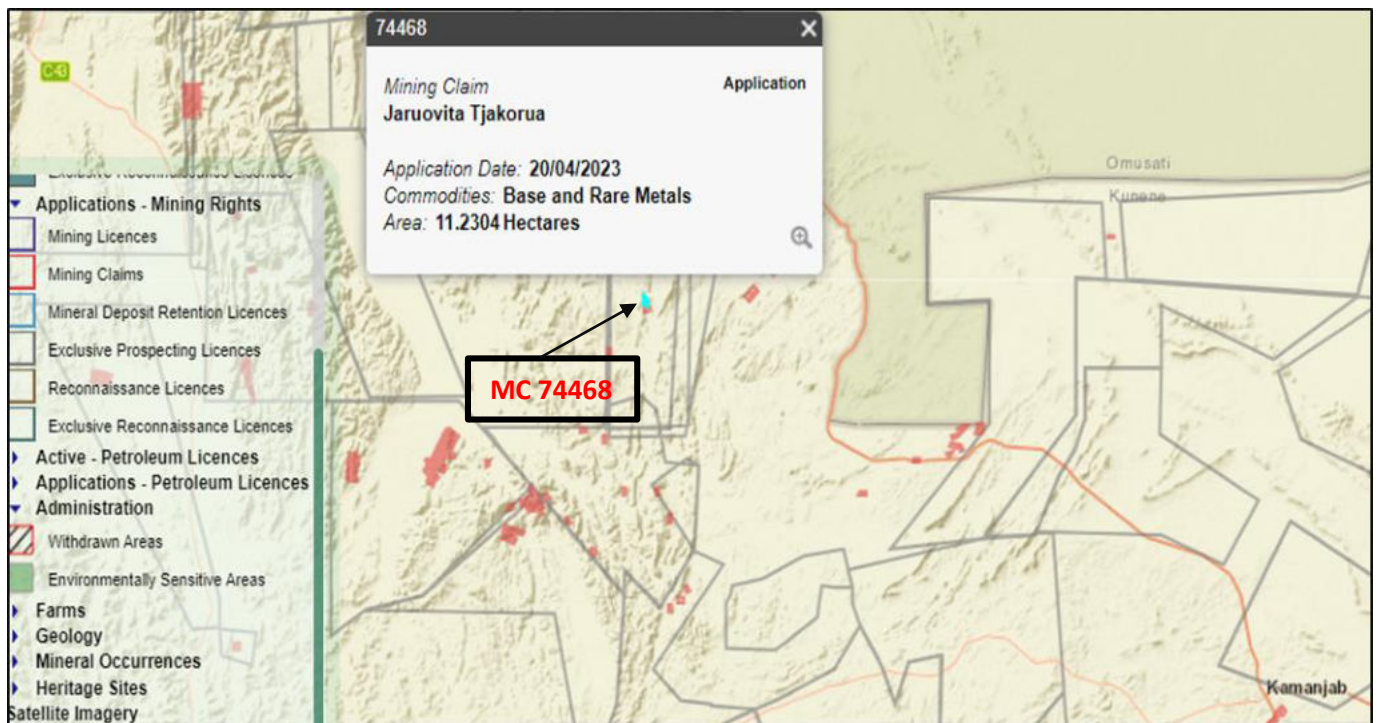


Figure 1: Location of Mining Claim 74468 in Kunene Region (Source: MME mining cadastre portal).

Table 1: GPS corner coordinates of Mining Claim 74468, Kunene region.

ORDER	LATITUDE	LONGITUDE
1	19°19'41" S	14°17'01" E
2	19°19'43" S	14°17'09" E
3	19°19'28" S	14°17'08" E
4	19°19'22" S	14°17'03" E

This proposed project is a listed activity in terms of the Environmental Management Act (EMA). Prior to the anticipated project initiation, approval is

required for an Environmental Clearance Certificate (ECC) to be issued by the competent authority to the proponent, in terms of the Environmental Management Act No.7 of 2007 and its regulations of 2012.

1.2 Purpose and scope of this EMP

Regulation No. 8 of the Environmental Management Act's (EMA) (7 of 2007) and its Environmental Impact Assessment Regulations of 2012 obliges that a draft Environmental Management Plan (EMP) be established as part of the scoping Environmental Assessment (EA) process. A 'management plan' is well-defined as:

"...a plan that describes how activities that may have significant environments effects on the environment are to be mitigated controlled and monitored."

The information enclosed in this EMP is centered on the project description as provided in the environmental scoping report. This EMP provides a reasonable outline, proposed mitigation measures and management approaches for the proposed copper processing plant.

Well-defined in the EMP are the practices, techniques, roles and responsibilities to ensure that the management schedules are efficiently and correctly executed. This EMP report is an supplementary to the environmental scoping report. This Environmental Management Plan shall be updated/revised when there are changes in the scope of works.

The labor force working on this proposed project shall be by law mandatory to comply and adhere to the principles set out in this EMP. The scope of this Environmental Management Plan takes account of all undertakings conducted during the construction, operational and decommissioning phase.

1.3 Compliance to the EMP

This EMP is a legally binding document as stipulated in the Environmental Management Act, 2007 (Act No. 7 of 2007). The Proponent, contractors and employees must therefore obey and comply with the context of this document. Any changes made dependent on the changing environments and new additional information that may be available in the future, must be reviewed according with the provision of the EMA.

Non-compliance shall be recorded, comprising a short explanation and the cause for the non-compliance, the person responsible, the consequence, and the correct action taken and any follow-up measures compulsory.

1.4 Environmental Assessment Practitioner

Epic Environmental Consultancy CC an independent environmental consultancy was appointed by the proponent, Jaruvita Tjakorua, to conduct an environmental assessment of the potential biophysical and socio-economic environmental impacts that may probably arise from the proposed project. The result of the Environmental Scoping Assessment with the purpose to provide the Ministry of Mines and Energy (MME) and the Ministry of Environment, Forestry and Tourism's (MEFT) Department of Environmental Affairs (DEA) with adequate information to make well informed decision on the approval of the Environmental Clearance Certificate (ECC) for the planned development.

1.5 Assumptions and Limitations

- The Safety Management Plan shall be developed by the Proponent. This EMP is established on the project description in the Environmental Scoping Report.
- The mitigation measures commended in this Environmental Management Plan document is centred on the identified impacts in the scoping report were recognized and established on the provided project description, site study and public consultations. Should there be changes in the project scope, the identified risks will have to be reassessed and mitigation measures must be provided respectively.
- This document has been drafted centred on the scoping environmental assessment only; and no specialist studies were comprised as part of the assessment.
- The information enclosed in this report is established on information provided by the Proponent; and is believed or well thought-out to be true. Epic Environmental Consultancy CC shall not be held liable for any false information provided by the proponent.

2. REGULATORY FRAMEWORK

2.1 Environmental Requirement

This proposed project is a listed activity as specified in the Environmental Management Act No. 7 of 2007 and the Environmental Impact Assessment Regulation No. 30 of 2012. As a listed activity an application for an Environmental Clearance Certificate is mandatory. An Environmental Scoping Assessment Report and EMP are compulsory as part of the ECC application to complement the process.

This EMP has been compiled in accordance with the requirements of the Environmental Management Act, No. 7 of 2007 and its regulations.

The purpose of the EA was to identify, assess and establish likely environmental impacts that may arise from the proposed activity. An Environmental Assessment is a process of identifying, predicting, interpreting and communicating potential impacts to interested and affected parties (I&APs).

Section 7 of the Environmental Impact Assessment (EIA) Regulations (GN notice No. 30 of 2012), stipulates that if an activity is listed, an Environmental Scoping Report and Environmental Management Plan should be submitted to the Environmental Commissioner (EC) as part of the application for an Environmental Clearance Certificate (ECC).

In harmony with the Environmental Management Act (2007) of Namibia (and its EIA regulations of 2012), an Environmental Clearance Certificate is required for:

- *“The construction of facilities for any process or activities which requires a license, right or other form of authorisation, and the renewal of a license, right or other form of authorisation, in terms of the Minerals (Prospecting and Mining Act), 1992.”*
- *“Resource extraction, manipulation, conservation and related activities.”*
- *“Other forms of mining or extraction of any natural resources whether regulated by law or not.”*
- *“The construction of facilities for the transmission and supply of electricity”*
- *“The abstraction of ground or surface water for industrial or commercial purposes.”*

The Environmental Management Plan (EMP) is the instrument used to minimize or manage the impacts identified during the environmental assessment process.

The EMA stipulates that for every activity undergoing an Environmental Assessment process, an Environmental Management Plan (EMP) should be established. The EMP summarizes mitigation measures alongside specific periods, stages or processes for the proposed development. The EMP for this specific development will summarize specific roles and responsibilities that the proponent will obey to.

2.2 Correlated National Legislations and Regulations

Table 1: Related National Legislations and Regulations

Legislation	Applicability	Legislation Objective(s)
The Namibian Constitution	To maintain the ecosystems, ecological processes and biological diversity by conducting Environmental Impact Assessment (EIA).	“The state shall actively promote and maintain the welfare of the people by adopting policies that are aimed at...maintenance of ecosystems, essential ecological processes and the biological diversity of Namibia and utilization of natural resources on a sustainable basis for the benefit of all Namibians, both for present and future”.
Environmental Management Act No.7 of 2007	Legal requirement to carry out an Environmental Impact Assessment (EIA).	The Environmental Management Act No.7 of 2007 promotes the sustainable management of the environment and the use of natural resources and provides for the process of

		assessment and control of activities which may have significant effects on the environment; and provides for incidental matters. The Act ensures that potential impacts are considered, a comprehensive stakeholder's consultation is carried out, all interested and affected parties are given a chance to comment/object on the project. The Act as well provides a list of activities that may not be undertaken without an Environmental Clearance Certificate.
Environmental Impact Assessment (EIA) Regulations (GN notice No. 30 of 2012)	Provides guidelines for Environmental Assessments.	Provides procedures for Environmental Assessments.
Minerals (Prospecting and Mining) Act No.33 of 1992 As amended Minerals (Prospecting and Mining) Amendment Act 8 of 2008	Governs all mining activities in the country.	To provide for the reconnaissance, prospecting and mining for, and disposal of, and the exercise of control over, minerals in Namibia; and to provide for matters incidental thereto.

Public Health Act No. 36 of 1919	Safeguards the public is protected from noise, dust and air pollution.	No person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.
Water Resources Management Act No. 11 of 2013	Guarantees that the water systems are not polluted and that pollution control mechanisms are in place.	An Act to provide for the management, protection, development, use and conservation of water resources; to provide for the regulation and monitoring of water services and to provide for incidental matters.
Environmental Policy Framework (1995)	Provides guidelines for EIA.	The Policy ensures that all developmental projects are subjected to environmental assessments so that all potential impacts are taken into consideration and incorporated into the planning and development stages.
Labour Act No. 11 of 2007	Regulates labour in general, remuneration, etc in the country.	The Labour Act regulates labour in general and protects the safety, health and welfare of employees.

		The regulation of 1997 relating to the safety and health of employees at work, sets out the duties of employers, welfare and facilities at the work place.
Soil Conservation Act No. 76 of 1969	Promotes soil conservation.	The Act promotes the conservation of soil and the prevention of soil erosion.
National Heritage Act No. 27 of 2004	Provides protection and conservation of places and objects that has national heritage significance; and the registration of such places or objects.	The Act makes provision for the protection of places and objects of heritage significance and the registration of such places and objects. Section 46 of the Act, further prohibits the removal, damage, alteration, excavation of national sites or remains; and Section 48, sets out the procedure for application and granting permits for exploration activities such as trenching, drilling, etc.
Hazardous substances Ordinance No. 14 of 1974	Controls the handling of hazardous substances such as fuel, fire, etc.	The Ordinance controls the handling of hazardous substances such as manufacturing, imports and exports to ensure human and environmental safety.

2.3 Permits Related with the proposed development project

Permits that may be necessary and associated with the proposed exploration project are listed in the below table.

Table 2: Permits related with the proposed development

PERMITS/CERTIFICATES	ACTIVITY	VALIDITY
Exclusive Prospecting Licence (EPL)	Mineral rights ownership and prospecting authorization	3 years
Environmental Clearance Certificate	No listed activities are to be conducted without an approved ECC	3 years
Forestry Permits	Controls/regulates the forest species to be cleared.	Temporary/permit dependent
Water abstraction	Regulates groundwater abstraction (MAWLR)	2-5 years
Notice of intention to drill	Should be submitted to MME prior to drilling Permit	Dependent
Fuel Installation Certificate	Regulates the amount of fuel product in control	3 months (temporary)/ permanent

2.4 Workforce

Initially, about 10 workers will be temporarily employed (this number includes unskilled, skilled and professionals). The staff will work day time only on a 10-hour shift, no night shift.

The objective is to use people from the surrounding area to avoid the requirement to provide formal housing and additional disturbance to the area. The intention is to avoid relocating people from their residences and families. A sufficient number of people already reside in the surrounding area that can be employed at the facility.

3. IMPACT ASSESSMENT

The main impacts related with the proposed project is summarized below.

Table 3: Possible identified impacts

POTENTIAL IMPACT	IMPACT DESCRIPTION
Soils	Oil spills and leakages from vehicles and/or equipment and the inappropriate disposal of hydrocarbons and other likely hazardous contaminants that might be used during construction.
Loss of biodiversity and vegetation	The probable removal of grass and/or shrubs within the project area.
Surface and underground water contamination	Inappropriate discarding of hydrocarbons and other likely dangerous/harmful contaminants as well as over abstraction may cause pollution/contamination risks. Ensure that proper mitigation measures are in place in case there's spills/leakages.
Air quality	Likely gas and dust emissions from construction machinery and vehicles. The low Rate/occurrence at which these activities will be undertaken, duration and impact intensity will be low.
Wildlife poaching	People/some staff may take advantage of their stay in the project area to hunt wild animals.
Health and Safety	Unsuitable handling of chemicals substances and operating machinery and equipments may compromise the health and safety of the personnel.

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Employment Opportunities	There will be need for the services of unskilled, semi-skilled and skilled personnel.
Skills and knowledge transfer (Local Economic Empowerment)	Unskilled and semi-skilled personnel will be trained before commencing with their duties and may receive certification.

4. ROLES AND RESPONSIBILITIES

The Proponent will be in control of the Environmental Clearance Certificate for this proposed project and shall be liable for the execution and management of this Environmental Management Plan. The implementation, monitoring and management of this EMP shall be carried out on day-to-day accountabilities and monthly reviews. All contractors should be directed by this EMP.

The proponent shall arrange for a project team to manage and carry out the work comprising of the proponent's personnel and contractors. One employee shall be recognized by the Proponent to help assist and support the Proponent at all times for the duration of the project.

The proponent shall be accountable to ensure that the project team, suppliers and/or contractors, obey and comply with the set out measures in this Environmental Management Plan; warranty that all personnel get adequate training and coaching; and that environmental duties are clearly agreed and understood.

4.1 Roles and Responsibilities

The below table shows the roles and responsibilities of the Proponent, contractors and personnel for the proposed project.

Table 4: Roles and Responsibilities

Duties allocated to the below positions during planning and design, construction, operation and maintenance and decommissioning phases:

ROLE	RESPONSIBILITIES
ENVIRONMENTAL COMPLIANCE OFFICER (ECO)	The Ministry of Environment, Forestry and Tourism (MEFT) is the overseer of environmental protection. The ECO shall be an appointed Environmental Officer from the Directorate of Environmental Affairs reliable to carry out compliance. The ECO may carry out inspections and monitoring any time to ensure compliance.

<p>PROPONENT OR PROPONENT'S REPRESENTATIVE</p>	<ul style="list-style-type: none"> ○ Overall responsibility for the execution, administration and management of this EMP; ○ Accountable for providing the required resources (including financial and technical) for all duties; ○ Hire Managers such as a Project Manager and/or a Site Manager; ○ Warranty that all employees, contractors and visitors get inductions on environmental measures as defined in the scoping and EMP reports and safety measures as compiled by the proponent. ○ Ensure the environmental rules are communicated to all personnel and that all staffs, contractors, visitors understand comply with the EMP. ○ Issue fines for breaking EMP requirements.
<p>PROJECT/SITE MANAGER</p>	<ul style="list-style-type: none"> ○ Ensure all employees and contractors take part in a site induction process before they commence with work. ○ Keep community concerns and issues register. ○ Keep records of complaints; ○ Ensure that ultimate environmental practice is carried out during the course of the duration of the project; and report any non-compliance or accidents to the authority. ○ Responsible for compliance with this EMP, oversee all day to day activities during the duration of the development project, including routine and non-routine maintenance works, and decommissioning;

	<ul style="list-style-type: none"> ○ Make sure enough resources are available for the execution of this EMP; ○ Ensure that all employees, contractors and visitors to the site are familiar with the requirements of this EMP, significant to their roles at all times; ○ Responsible for environmental awareness and management training and site inductions for all employees, contractors and visitors; ○ Monitor everyday tasks and ensure devotion by employees to the EMP; ○ Receive, respond to and record complaints; and ○ Report any non-compliance or accidents to the proponent. ○ Liable for management, maintenance and review of the Environmental Management Plan.
Personnel (and contractors and visitors)	<ul style="list-style-type: none"> ○ Accountable for reporting incidents, accidents, tasks and conditions/issues that differ from the EMP or that are not complying immediately to their supervisor; ○ Legally responsible for complying and adhering to this EMP for the duration of the project ○ Attend site inductions when required to do so; and ○ Ensure that adequate information on activities and roles are provided and understood. ○ Ensure to wear personal protective clothing at all time when working;

4.2 Employment

The proponent shall ensure that local people have access to information about employment opportunities; and that the jobless living in the local area are considered first for employment positions; the total number of job opportunities shall be made known together with the related skills and qualifications; the employing process should be clearly explained and communicated; the duration of the employment shall be clearly stated; and employees with no proof of permanent residence shall not be hired.

4.3 Contractors

All contractors that will be appointed during the proposed development must ensure that accurate actions are taken to report all possible environmental hazards and cases/incidents to the Project Manager; carry-out activities according to this EMP and related policies, procedures, management plans, legislative requirements; and implementing appropriate environmental management measures.

4.4 Disciplinary Actions

Non-compliance to the EMP shall result in disciplinary legal action such as:

- Suspension of work;
- Monetary penalties.

The disciplinary action shall be determined as per the provision of EMA and relevant statutory framework. Under Section 27 (4), Any person who contravenes subsection (3) commits an offence and is on conviction liable to a fine not exceeding N\$500 000 or to imprisonment for a period not exceeding 25 years or to both such fine and such imprisonment”.

5. TRAINING AND COMMUNICATIONS

5.1 Emergency Response Services

All personnel will be made aware of the emergency response numbers. These numbers will be posted on site and made accessible in every company vehicle.

5.2 Communication and Training

The Project Manager shall communicate all environmental issues to the project team through audits, site inductions, site inspections; information on incident response actions; and meetings on specific environmental issues.

All Stakeholders should be aware of all likely impacts and how to minimize them. It is vital to ensure that all stakeholders are well informed often; and appropriately trained on functioning measures as required. All employees employed on the project shall be knowledgeable to execute responsibilities that are likely to cause an environmental impact.

All the workers involved in the project must understand why the environment needs to be protected, including the social characteristics involved, how the proposed development can impact the environment and likely mitigation measures.

This EMP should be given/distributed to Staffs and all contractors employed on the site to ensure that the environmental requirements are effectively communicated.

Delicate tasks shall be communicated to workers and contractors. Discussions among the management will take account of any complaints received and actions to resolve them, incidents and responses, assessments, audits and any goal achievements.

5.3 Induction

Induction is defined as *“vital information session that helps to acquaint people with the locations, equipment, materials, procedures and tasks they may come across while working at or visiting a site for the first time”*.

To accomplish the greatest results, inductions need to be custom-made and targeted. They should accommodate all workers (i.e. employees, contractors, trainees).

Personnel shall be obliged to a refresher if:

- They have been absent for some time
- The work environment is different to that normally encountered (e.g. switching to night shift for first time).

5.4 Site inductions

Site inductions shall make sure that employees receive suitable information and, before commencing work and that they can identify the hazards on site that can harm them. Personnel should also understand the control measures in place to safeguard themselves from the hazards/incidents.

Induction requirements shall be determined using information obtained from:

- Statutory requirements
- Site specific capability and training needs analysis
- Standards related to site.

All site inductions shall comprise an assessment to maintain the required awareness that has been retained by employees. It is vital to examine the site induction often to determine if the content is still associated.

Site inductions shall include a formal program that provides workers with an understanding of:

- Site layout comprising emergency assembly points
- Emergency contact numbers
- The responsibilities of the proponent and employees
- Common probable incidents on the site and their control measures
- Basic environmental management principles to lessen negative impacts and apparatuses used on site
- Reporting procedures for incidents; and
- The normal manners anticipated of employees on sites

5.5 Grievance Register

The employees shall be informed about the complaints register, its location and the person responsible for keeping it in order to refer residents or the public who wish to lodge a complaint. The complaints register shall be kept for the entire period of the project; and will be made available for government or public review upon request. It is the responsibility of the Project Manager/Proponent to keep up a complaint register that has particulars of the names of the complainant, date and time of the complaint and actions taken to resolve the issues. The complainant shall be informed in writing of the results of the investigation and actions to be taken to correct or address the matters.

5.6 Environmental Inspections and Compliance Monitoring

The Proponent or the assigned Project Manager shall be accountable to ensure that this EMP is adhered to and complied with at all times throughout their daily roles; and to ensure that contamination control measures are obeyed to. The proponent to ensure that daily, weekly and monthly inspections are carried out.

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6. ENVIRONMENTAL MANAGEMENT PLAN (EMP)

The common objective of the administration actions of the EMP is to lessen the waste generation, low to zero contamination cases, minimal clearing of vegetation and earthworks, protection indigenous flora and fauna; health and safety of the employees and make sure least disturbance to activities in the nearby surroundings.

Table 5: Environmental Mitigation Measures to be executed

POTENTIAL IMPACT	MITIGATION MEASURE	MONITORING REQUIREMENTS	RESPONSIBILITY
BIODIVERSITY LOSS/HABITAT DESTRUCTION	<ul style="list-style-type: none"> *Employees shall not be allowed to cut and collect firewood without permission from land/farm owners. *Employees shall not be allowed to catch fish in the river, if there is any river nearby. * Make available electricity or gas to workforce for cooking and heating to discourage firewood collecting. * Encourage re-vegetation in cleared areas when the project development activities will come to an end. *No animals must be killed unless it poses danger. *No domestic animals shall be permitted at the site. *Avoid the damage of protected species by reducing clearance areas through proper planning of the proposed development. * Where possible, rescue and put somewhere else plants of importance. 	DAILY	PROJECT/SITE MANAGER EMPLOYEES, CONTRACTORS

SOIL EROSION	<p>*Where possible, vegetation will be cut at ground level, leaving the root system intact so as to limit soil erosion.</p> <p>*Land clearing will be conducted in a way that restricts topsoil disturbances.</p> <p>*Land will be reclaimed as soon as possible and when that is done, topsoil will be replaced on cleared areas.</p> <p>* Movement of all vehicles must strictly be within the project site;</p> <p>*Sand and gravel loads from any excavation trenches should be placed in designated areas;</p> <p>*Rehabilitate all sites upon completion of the project;</p> <p>*proposed development should be restricted to potential targeted sites only.</p>	WEEKLY	PROJECT/SITE MANAGER,
NOISE DISTURBANCE	<p>* Employees must NOT be exposed to noise levels above the required 85dB, earmuffs must be provided.</p> <p>* All vehicles and machinery/equipment to be shut down between periods of use.</p> <p>*Noise irritation shall be monitored accordingly.</p> <p>*If possible, use equipment with low noise emission.</p>	<p>DAILY</p> <p>OR AS APPROVED BY MANAGEMENT</p> <p>NB: PUBLIC COMPLAINTS</p>	PROJECT/SITE MANAGER, EMPLOYEES, CONTRACTOR

		MUST BE RECORDED	
EMISSIONS AND DUST	<p>*Specific activities that may generate dust and impact on residents must be avoided during high wind events.</p> <p>*Monitoring phases of dust manufactured by project related with vehicles dust control activities.</p> <p>*Minimum vehicle speeds on site roads to be 30km/h.</p> <p>*During dry periods of the year, when the surface of roads are likely to cause significant dust, The proponent will take effective steps to minimize dust.</p> <p>* Gravel or sand loads must be covered or frequently sprayed with water;</p> <p>*All vehicles and machinery/equipment to be shut down between periods when not in use.</p> <p>*Measures that may be utilized to control dust include: 1) Routine watering of roads and work sites; 2) Submission of dust suppressants as a longer term solution to road dust.</p> <p>*Use existing access roads and paths where possible, to avoid creation of new roads.</p> <p>* Non-toxic human dust exposure levels may not exceed 5mg/m³ for respiratory dust and 15mg/m³ for dust in total as per Labour Act.</p>	<p>DAILY/WEEKLY/MONTHLY</p> <p>NB: PUBLIC COMPLAINTS MUST BE RECORDED DAILY, WEEKLY</p>	<p>PROJECT/SITE MANAGER, EMPLOYEES, CONTRACTOR</p>

	<p>*Engines must be switched off when vehicles are not in use.</p>		
<p>SURFACE AND GROUNDWATER CONTAMINATION</p>	<p>*Consider other sites when the water table is too high.</p> <p>*Drill structures should be dug to direct any unintended spills into sumps.</p> <p>*Waste water shall be contained.</p> <p>*Water from existing water sources shall be used in agreement with the owners of farms/land in the area, * Heavy drilling equipment should be cautiously checked for leakages; and if refuelling is taking place on site it must either be on a tank mounted on stilts to prevent any leakage and pollution.</p>	<p>DAILY/ WEEKLY/ MONTHLY</p>	<p>PROJECT/SITE MANAGER, EMPLOYEES, CONTRACTOR</p>
<p>SOIL AND WATER CONTAMINATION</p>	<p>* Any spills and leaks, polluted soils must be collected and disposed of at an approved local site.</p> <p>*Still vehicles and equipment must have drip trays to collect leakages of lubricants and oil.</p> <p>*Spills and leaks to be cleaned immediately.</p>	<p>DAILY,WEEKLY</p>	<p>EMPLOYEES, CONTRACTOR ,PROJECT/SITE MANAGER</p>

WASTE GENERATION	<p>*Implement a standard waste management procedure for all types of wastes.</p> <p>*Waste should be disposed of at approved disposal sites only.</p> <p>*Recycle and Re-use where possible.</p> <p>*Wastewater should be contained and not disposed on site.</p> <p>*Provide temporary toilets in the ratio of 1:15 and 1:30 for females and males; and effluent to be disposed of at the nearest local waste water treatment plant.</p> <p>*Functional toilets shall be on site.</p> <p>*No waste shall be buried on site or in the surrounding areas.</p> <p>*Harmful waste shall not be allowed on site.</p>	<p>DAILY</p> <p>Wheelie bins and skip containers must be provided on site.</p> <p>Record effluent disposal</p>	<p>EMPLOYEES, CONTRACTOR, PROJECT/SITE MANAGER</p>
SAFETY & HEALTH	<p>*Every worker shall be provided with Personal Protective Equipment (PPE), ear muffs, etc which must be worn at all times during working hours and/or when on site.</p> <p>* A compulsory safety induction training course shall be given to all personnel.</p>	<p>AS CERTIFIED BY THE APPROVED PERSONNEL (VISUAL SIGNS)</p>	<p>MANAGEMENT, EMPLOYEES & CONTRACTORS</p>

	<p>*The Proponent shall develop a health and safety</p> <p>*Clear health and safety signs at every selected areas, marked “ENTRANCE, EXIT, ASSEMBLY POINTS, DANGER ZONE, NO ENTRY, STAFF ONLY, etc.</p>		
ALIEN INVASIVE	<p>*All alien invasive should be cleared out.</p>	AT THE END OF THE PROJECT	PROJECT/SITE MANAGER/ CONTRACTOR /EMPLOYEES
VISUAL AND SENSE OF PLACE	<p>*The proponent to ensure that rehabilitated areas balance in well with the natural environment.</p> <p>*Upon completion of the development, overburdens should be placed in the trenches and excavated areas be levelled as part of the rehabilitation process.</p>	AT THE END OF PROJECT.	PROPONENT/ PROJECT/SITE MANAGER/ CONTRACTOR /EMPLOYEES
WILDLIFE POACHING	<p>*No poaching shall be allowed by any personnel.</p>	DAILY/WEEKLY /MONTHLY	MANAGEMENT, EMPLOYEES & CONTRACTORS
WATER ABSTRACTION	<p>*A valid water abstraction permit should be obtained from the MAWLR, when required.</p> <p>* Detect and control water usage and minimise unnecessary use where necessary.</p> <p>*Re-use and Recycle water where possible.</p> <p>*Pollution or any noxious waste should not be allowed to enter the freshwater ecosystem.</p>	OBTAIN A VALID WATER ABSTRACTION PERMIT (where required)	MANAGEMENT

EMPLOYMENT / SKILLS AND KNOWLEDGE TRANSFER/ INCOME	<p>*Hire local contractors. *Reasonable wages, compensation; and labour practise as per Namibian Labour Laws must be followed. * All general work must be set aside for local people except in positions requiring specialized skills.</p>		PROPONENT/ PROJECT/SITE MANAGER
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Table 6: Storage of hazardous chemicals

Product	Handling	Storage
Diesoline	<p>Diesel shall be handled according to its Material Safety Data Sheet. Where probable, diesel transferrals must take place in the chosen refuelling areas on smooth, impermeable surfaces. Drip trays should be positioned at each machine whilst being refilled. Drip trays shall be drained into appropriate containers. Smaller plant and tyre wheeled equipment shall be re-fuelled at the main storage areas.</p>	<p>Diesoline shall be put in storage in tanks in bunded areas with smooth, impermeable surfaces. Diesoline may be stored on the outside in clean 210 L drums. These drums may only be stored on smooth, impermeable surfaces in facilities that will likely contain spills.</p>
Oil	<p>All oils shall be handled according to the specific Material Safety Data Sheets.</p>	<p>Mild steel or stainless steel drums. The containers shall be stored in bunded facilities that will have the capacity contain all potential spills.</p>

Table 7: Groundwater Monitoring (construction, operational, decommissioning and post closure stage)

Monitoring Position	Sampling Interval	Analysis	Water Quality Standards
All boreholes monitoring	Quarterly: quantifying the depth of groundwater level	N/A	N/A
Monitoring of selected boreholes	Twice-yearly: sampling of water quality analysis	Full analysis every 6 months. Groundwater level	WHO Drinking Water Standards, Namibia Water Quality Guidelines:
Rainfall	Daily	N/A	N/A

7. RECOMMENDATIONS AND CONCLUSION

The Environmental Scoping Assessment report will be handed in to the Directorate of Environmental Affairs (DEA) to empower them to deliberate whether or not to grant the required Environmental Clearance Certificate to the proposed development and for the conditions for this development to be well-clear. This targets to ensure that knowledgeable conclusions are made that contributes to an environmentally, socially sound and viable development.

The proposed exploration project will create or offer employment opportunities through business, skills training and transfer, credit of side-lined communities. The anticipated project is a small-scale development; and at its life span depends on mineral discovery on the mining claim.

Continual engagement with residents and surrounding community shall be carried out at all times during the duration of the project by the proponent to further identify and address any concerns or issues; and ensure that appropriate mitigation and controlling measures are acknowledged and act in accordance with the Environmental Management Plan.

The identified likely impacts associated with the proposed project are manageable; and can be reduced considerably to acceptable standards or measures.

Consequently, Epic Environmental Consultancy CC recommends that the proponent receive the Environmental Clearance Certificate (ECC) for the proposed project, on condition that:

- The Environmental Management Plan (EMP) is complied with/adhered to at all times by the proponent and all employees.
- All permits/licences required are acquired e.g. Abstract water, tree removal or clearing for any new roads, bulk storage of petroleum products, etc.
- The proponent should introduce a monitoring programme to cautiously monitor the surface and underground water during construction and operating stages.
- The proponent should identify potential monitoring ideas to measure and record flow capacities as well as feasibly measure water quality especially during rainy season. The estimates would help to have a considerate water

flow, to address appropriate methods against probable impacts to the environment.

This Environmental Management Plan is a legal document, compelling the proponent to abide by all mitigation measures, monitoring programmes and/or any other approaches/techniques as presented in this document.